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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,565	11/20/2003	Phillip Kaufman	IOR-001	3550
29933	7590	09/19/2006		
PALMER & DODGE, LLP KATHLEEN M. WILLIAMS 111 HUNTINGTON AVENUE BOSTON, MA 02199			EXAMINER BAUER, SCOTT ALLEN	
			ART UNIT 2836	PAPER NUMBER

DATE MAILED: 09/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/719,565	KAUFMAN, PHILLIP	
	Examiner	Art Unit	
	Scott Bauer	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 12 June 2006.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,2 and 4-19 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1,2 and 4-19 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 20 November 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claim 14 is rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a credible asserted utility or a well-established utility. Motivation can be found in the previous office action.

Claim Rejections - 35 USC § 112

Claim 14 is also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a credible asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

Claim Objections

3. Claims 1, 5, 11 & 12 are objected to because of the following informalities:

Claims 1 & 11 are objected to as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "capable of electrifying the atmosphere" is objected to because it is unclear how an antenna electrifies the atmosphere.

In claim 5, line 2, the "bring" should be changed to --bringing--.

In claim 12 line 2 the word "notes", should be changed to "nodes".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 4, 6, 7, 9, 10, 15, 17 & 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biby (US 4,670,760) in view of Hoag ("Weather Modification" Hoag, Philip (1996). No Such Thing as Doomsday. Montana: Yellowstone River Publishing.).

With regard to Claim 1, Biby teaches a ground wave antenna capable of ionizing the atmosphere, the antenna comprising: a plurality of peripheral nodes (50); a central node (32) located within the plurality of peripheral nodes (50); a plurality of peripheral spokes (52) for connecting each of the peripheral nodes to adjacent peripheral nodes; a plurality of radial spokes (70) for connecting the peripheral nodes (50) to the central node (32); and a power supply (40 & 48) associated with said antenna that provides the plurality of peripheral and radial spokes with a selected power signal to induce said antenna to ionize the atmosphere.

Biby does not teach that the antenna can be used for modifying weather conditions, or that the selected power signal is used to induce said antenna to induce changes in weather conditions.

Hoag teaches that radio frequencies ionize the air (Page 1 lines 6-25), that a ground wave antenna can be used to modifying weather conditions, and that the selected power signal is used to induce said antenna to induce changes in weather conditions (Page 3 lines 7-23).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Biby with Hoag, by using the ground wave antenna of Biby to modify weather conditions as taught by Hoag, for the purpose of controlling food production in an area (Hoag Page 3 Lines 28-35).

Further, It has been held that the recitation that an element us "capable of" performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

6. With regard to Claim 2, Biby in view of Hoag discloses the claimed invention except that the selected power signal has a voltage value of between about zero volts and about positive 500 kilovolts and between about zero volts and about negative 500 kilovolts and having a current value of between about zero and about five-hundred millamps. However, it would have been obvious to one of ordinary skill in the art at

the time the invention was made to supply the antenna with a selected power signal with enough power to transmit to a desired area or modify weather within a desired radius, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

7. With regard to Claim 4, Biby in view of Hoag discloses the antenna of Claim 1. Biby further discloses that the central node comprises a central base portion; and a central vertical member (32) coupled to the base portion.

8. With regard to Claim 6, Biby in view of Hoag discloses the antenna of Claim 4. Biby further discloses that the height of the central vertical member decreases as the number of peripheral spokes increases (column 7 lines 44-59).

9. With regard to Claim 7, Biby in view of Hoag discloses the antenna of Claim 1. Biby further discloses that each of the peripheral nodes comprises a peripheral base portion and a peripheral vertical member (50) coupled to the peripheral base portion.

10. With regard to Claim 9, Biby in view of Hoag discloses the antenna of Claim 1. Biby further discloses that the radial spokes and peripheral spokes are formed from a medium for conducting electricity (column 5 lines 42-47 & column 6 lines 42-47).

11. With regard to Claim 10, Biby in view of Hoag discloses the antenna of Claim 1. Biby further discloses that an isolator (72) is coupled to the central node and extends radially to electrically isolate the central node from each of the plurality of radial spokes; and an isolator (74) coupled to each of the peripheral nodes and extending radially to electrically isolate each of the peripheral nodes from each of the plurality of radial spokes and each of the plurality of peripheral spokes.

12. With regard to Claim 15, Biby teaches a method comprising the steps of providing an antenna that includes, a plurality of peripheral nodes (50), and a central node (32); and applying electric power (40 & 48) to the peripheral spokes and radial spokes.

Biby does not teach that the method ionizes the atmosphere or that applying power to the spokes will ionize the air.

Hoag teaches that radio frequencies ionize the air and can be used to modify weather.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Biby with Hoag for the purpose given above.

13. With regard to Claim 17, Biby in view of Hoag discloses the method of Claim 15. Biby further discloses that the step of applying electrical power comprises supplying the peripheral spokes (52) and the radial spokes (70) with a voltage (40 & 48) that induces a discharge on the peripheral and radial spokes.

14. With regard to Claim 18, Biby discloses the method of Claim 15. Biby further discloses that the radial spokes (70) are connected to the central node (34) at one end and to the peripheral nodes (50) at the other end through electrical isolators (72 & 74).

15. Claims 5 & 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biby in view of Hoag as applied to claims 4 & 7 above, and further in view of Kulik et al.(US 3,189,906).

16. With regard to Claims 5 & 8, Biby teaches the antenna of claims 4 & 7. Biby does not teach that the central vertical member includes a mechanism for bring the radial spokes connected to the central node from a first position to a second position or that the peripheral vertical members includes a mechanism for bringing the peripheral spokes and the radial spokes connected to the peripheral node from a first position to a second position.

Kulik et al., in Figure 1, teaches an antenna wherein spokes (24 & 25) can be brought from a first position to a second position by a retractable vertical member (23).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Biby in view of Hoag with Kulik et al., by allowing the vertical members of Biby (32, 34, 36) to retract, for the purpose of storing the antenna when it is not in use.

17. Claims 11-14, 16 & 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biby in view of Hoag and Ignatius (Ignatius, Adi. "Rain, Rain, Go Away, Go Soak Someone Less Willing to Pay." The Wall Street Journal 02 OCT 1992 A 1. 1 SEP

2006http://proquest.umi.com/pqdweb?did=27825974&sid=1&Fmt=3&clientId=19649&RQT=309&VName=PQD).

18. With regard to Claim 11, Biby teaches a system for ionizing molecules in the atmosphere, the system comprising: an antenna having a polygon base portion; a power source (40 & 48) for providing electric power to the antenna.

Biby does not teach a control unit for controlling the power source based on weather data and images, wherein the antenna radiates an electric field to ionize the atmosphere.

Hoag teaches that a ground wave antenna can be used to modify weather conditions by using an antenna to radiate an electric field to ionize the atmosphere.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Biby with Hoag, for reasons given above.

Ignatius teaches that an antenna can be used to modify weather conditions. Ignatius teaches that a weather-modifying device was turned on by a control unit in response to the Moscow weather service predicting several days of rain (paragraphs 7

& 8). The prediction would necessarily be based on weather data and images from radar.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Biby with Ignatius, by using the control unit of Ignatius for controlling the power source of Biby based on weather data and images, for the purpose of more efficiently operating the antenna thus decreasing cost.

Further, It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from the prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham, 2 USPQ2d 1647 (1987).*

With regard to Claim 12, Biby in view of Hoag and Ignatius discloses the system of Claim 11. Biby further discloses that the antenna includes: a plurality of peripheral nodes (50); a central node (32) spaced apart from each of the plurality of peripheral nodes to form an inverted cone-like shape; a plurality of peripheral spokes (52) for connecting each of the peripheral nodes to the central node.

19. With regard to Claim 13, Biby in view of Hoag and Ignatius discloses the system of claim 11. Ignatius further discloses that the control unit controls the power supplied

to the antenna from a power source in an amount sufficient to ionize molecules in the atmosphere and thereby to modify weather conditions (paragraphs 7-9).

20. With regard to Claim 14, Biby in view of Hoag and Ignatius discloses the system of Claim 13. Ignatius further discloses that the control unit controls the power supplied to the antenna from the power source in an amount sufficient to ionize molecules in the atmosphere and thereby order modify weather conditions, said modification comprising inducing or inhibiting precipitation (paragraph 7-9).

21. With regard to Claim 16, Biby in view of Hoag teaches the method of claim 15. Biby in view of Hoag does not teach the step of controlling the electric power applied to the plurality of radial and peripheral spokes based on weather data and images to ionize the atmosphere.

Ignatius, in paragraphs 7-9, teaches that an antenna can be used to modify weather conditions. Ignatius teaches that a weather-modifying device was turned on by a control unit in response to the Moscow weather service predicting several days of rain (paragraphs 7 & 8). The prediction would necessarily be based on weather data and images from radar.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Biby with Ignatius, by using the control unit of Ignatius for controlling the power source of Biby based on weather data

and images, for the purpose of more efficiently operating the antenna thus decreasing cost.

22. With regard to Claim 19, Biby in view of Hoag and Ignatius discloses the method of claim 16. Hoag further discloses supplying one of a positive or a negative voltage to ionize the atmosphere in order to modify the weather conditions (Page 1 lines 11-17).

Response to Arguments

The rejection of claims 1-13 & 15-19 have been removed because the claims recite, "ionizing the atmosphere for modifying weather conditions". It is established that ionizing a localized area can prevent lightning from striking in the immediate area. For example Fowler et al. (US 5,694,286) discloses ionizing the air directly above sensitive outdoor electronic equipment to prevent the equipment from a lightning strike. As preventing a lightning strike can be considered modifying weather conditions, the present invention of claims 1-3 & 15-19 has a credible utility in that it could prevent lightning strikes within an immediate area.

However, the 101 rejection of Claim 14 is maintained as Applicant has submitted no data or evidence to counter the belief of many persons of ordinary skill in art who consider the invention to not have credible utility in view of contemporary knowledge with regard to inducing or inhibiting precipitation increasing or decreasing

relative humidity in order to help in controlling forest fires or to disperse fog, inducing changes to aid in controlling violent storms such as tornadoes and hurricanes, increasing or decreasing temperature and changing wind speed and direction.

Applicant's arguments in regard to the Moore article argue that the ionization antenna would be capable of ionizing air in the troposphere ($\frac{1}{2}$ a mile from the ground) to a greater extent than the ionosphere could ionize the troposphere ($\frac{1}{2}$ a mile from the ground), and that this greater amount of ionization would result in precipitation. Applicant should provide data disclosing the amount of ionization found $\frac{1}{2}$ a mile from the ground provided by both the ionosphere and the antenna to maintain this argument.

In regard to Applicant's argument regarding the summary of Minutes from the Texas Weather Modification Advisory Committee from April 22, 2004, Applicant argues that in a subsequent meeting on August 12, 2004, information was provided to the committee that removed any doubts that the committee had in the credibility of the utility of the invention. However, paragraph 9 of the Summary of Minutes submitted with the arguments states that Mr. Deschner of the committee "stated that he did not think Ionogenics had yet given a credible hypothesis to show why the system should work." The committee then passed that the application be submitted to the Department Executive Director without a recommendation. This Summary shows that the committee came to no consensus that the utility of the invention was credible.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Bauer whose telephone number is 571-272-5986. The examiner can normally be reached on M-F 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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PRIMARY EXAMINER